What is claimed is:

1. An apparatus, comprising:

an optical sublink including an operationally coupled plurality of optical fiber segments, the plurality of optical fiber segments being from a first optical fiber type, a second optical fiber type and a third optical fiber type,

the first optical fiber type having a positive dispersion and a positive dispersion slope,

the second optical fiber type having a negative dispersion and a negative dispersion slope,

the third optical fiber type having one from the group of (1) a positive dispersion and a negative dispersion slope, and (2) a negative dispersion and a positive dispersion slope.

2. The apparatus of claim 1, wherein:

the plurality of optical fiber segments define a plurality of link spans including a first link span,

the first link span having a first optical fiber segment and a second optical fiber segment from the plurality of optical fiber segments, the first optical fiber segment of the first link span being the first fiber type, the second optical fiber segment of the first link span being the second fiber type.

3. The apparatus of claim 1, wherein:

the plurality of optical fiber segments define a plurality of link spans including a first link span, a second link span and a third link span,

the first link span having a first optical fiber segment and a second optical fiber segment from the plurality of optical fiber segments, the first optical fiber segment of the first link span being the first fiber type, the second optical fiber segment of the first link span being the second fiber type,

the second link span having a first optical fiber segment and a second optical fiber segment from the plurality of optical fiber segments, the first optical fiber segment of the second link span being the first fiber type, the second optical fiber segment of the second link span being the second fiber type,

the third link span having a first optical fiber segment, a second optical fiber segment and a third fiber segment, the first optical fiber segment of the third link span being the first fiber type, the second optical fiber segment of the third link span being the second fiber type, the third fiber segment of the third link span being the third fiber type.

4. The apparatus of claim 1, wherein:

the first optical fiber type having a dispersion and a dispersion slope,

the second optical fiber type having a dispersion and a dispersion slope equal in magnitude to and opposite signed from the dispersion and the dispersion slope of the first optical fiber type.

5. The apparatus of claim 1, wherein:

the plurality of optical fiber segments define a plurality of link spans including a first link span, a second link span and a third link span,

the optical sublink further includes a first optical repeater, a second optical repeater, a third optical repeater and a fourth optical repeater,

the first link span is between the first optical repeater and the second optical repeater,

the second link span is between the second optical repeater and the third optical repeater,

the third link span is between the third repeater and the fourth optical repeater.

6. The apparatus of claim 1, wherein:

the optical sublink has an end-to-end dispersion for each wavelength from a plurality of wavelengths, the end-to-end dispersion for each wavelength from the plurality of wavelengths being substantially equal.

7. The apparatus of claim 1, wherein:

the plurality of optical fiber segments defines a plurality of link spans including a first link span, a second link span and a third link span,

the first link span having a local average dispersion for each wavelength from the plurality of wavelengths with a magnitude substantially greater than zero,

the second link span having a local average dispersion for each wavelength from the plurality of wavelengths with a magnitude substantially greater than zero,

the magnitude of the end-to-end dispersion for each wavelength from the plurality of wavelengths being less than an end-to-end tolerance dispersion, the third link span defining an end of optical sublink.

8. The apparatus of claim 1, wherein:

the plurality of optical fiber segments defines a plurality of link spans including a first link span, a second link span and a third link span,

the first link span including optical fiber segments from the plurality of optical fiber segments having the first optical fiber type and the second optical fiber type,

the second link span including optical fiber segments from the plurality of optical fiber segments having the first optical fiber type and the second optical fiber type, and

the third link span including optical fiber segments from the plurality of optical fiber segments having the first optical fiber type, the second optical fiber type and the third optical fiber type.

9. An apparatus, comprising:

an optical sublink including an operationally coupled plurality of optical fiber segments, the plurality of optical fiber segments being from a first optical fiber type, a second optical fiber type and a third optical fiber type,

the first optical fiber type having a dispersion and a dispersion slope,

the second optical fiber type having a dispersion and a dispersion slope substantially equal in magnitude to and opposite signed from the dispersion and the dispersion slope of the first optical fiber type,

the third optical fiber type having a dispersion opposite signed from the dispersion of the first optical fiber type and having a dispersion slope opposite signed from the dispersion slope of the second optical fiber type.

10. The apparatus of claim 9, wherein:

the plurality of optical fiber segments define a plurality of link spans including a first link span,

the first link span having a first optical fiber segment and a second optical fiber segment from the plurality of optical fiber segments, the first optical fiber segment of the first link span being the first fiber type, the second optical fiber segment of the first link span being the second fiber type.

11. The apparatus of claim 9, wherein:

the plurality of optical fiber segments define a plurality of link spans including a first link span, a second link span and a third link span,

the first link span having a first optical fiber segment and a second optical fiber segment from the plurality of optical fiber segments, the first optical fiber segment of the first link span being the first fiber type, the second optical fiber segment of the first link span being the second fiber type,

the second link span having a first optical fiber segment and a second optical fiber segment from the plurality of optical fiber segments, the first optical fiber

segment of the second link span being the first fiber type, the second optical fiber segment of the second link span being the second fiber type,

the third link span having a first optical fiber segment, a second optical fiber segment and a third fiber segment, the first optical fiber segment of the third link span being the first fiber type, the second optical fiber segment of the third link span being the second fiber type, the third fiber segment of the third link span being the third fiber type.

12. The apparatus of claim 9, wherein:

the plurality of optical fiber segments define a plurality of link spans including a first link span, a second link span and a third link span,

the optical sublink further includes a first optical repeater, a second optical repeater, a third optical repeater and a fourth optical repeater,

the first link span is between the first optical repeater and the second optical repeater,

the second link span is between the second optical repeater and the third optical repeater,

the third link span is between the third repeater and the fourth optical repeater.

13. The apparatus of claim 9, wherein:

the optical sublink has an end-to-end dispersion for each wavelength from a plurality of wavelengths, the end-to-end dispersion for each wavelength from the plurality of wavelengths being substantially equal.

14. The apparatus of claim 9, wherein:

the plurality of optical fiber segments defines a plurality of link spans including a first link span, a second link span and a third link span,

the first link span having a local average dispersion for each wavelength from the plurality of wavelengths with a magnitude substantially greater than zero,

the second link span having a local average dispersion for each wavelength from the plurality of wavelengths with a magnitude substantially greater than zero,

the magnitude of the end-to-end dispersion for each wavelength from the plurality of wavelengths being less than an end-to-end tolerance dispersion, the third link span defining an end of optical sublink.

15. The apparatus of claim 9, wherein:

the plurality of optical fiber segments defines a plurality of link spans including a first link span, a second link span and a third link span,

the first link span including optical fiber segments from the plurality of optical fiber segments having the first optical fiber type and the second optical fiber type,

the second link span including optical fiber segments from the plurality of optical fiber segments having the first optical fiber type and the second optical fiber type, and

the third link span including optical fiber segments from the plurality of optical fiber segments having the first optical fiber type, the second optical fiber type and the third optical fiber type.

16. An apparatus, comprising:

an optical sublink including an operationally coupled plurality of optical fiber segments,

the optical sublink having an end-to-end dispersion for each wavelength from a plurality of wavelengths, the end-to-end dispersion for each wavelength from the plurality of wavelengths being substantially equal.

17. The apparatus of claim 16, wherein:

the plurality of optical fiber segments defines a plurality of link spans including a first link span, a second link span and a third link span,

the first link span having a local average dispersion for each wavelength from the plurality of wavelengths with a magnitude substantially greater than zero,

the second link span having a local average dispersion for each wavelength from the plurality of wavelengths with a magnitude substantially greater than zero,

the magnitude of the end-to-end dispersion for each wavelength from the plurality of wavelengths being less than an end-to-end tolerance dispersion, the third link span defining an end of optical sublink.

18. The apparatus of claim 17, wherein:

the plurality of optical fiber segments is from a first optical fiber type, a second optical fiber type and a third optical fiber type,

the first link span including optical fiber segments from the plurality of optical fiber segments having the first optical fiber type and the second optical fiber type,

the second link span including optical fiber segments from the plurality of optical fiber segments having the first optical fiber type and the second optical fiber type, and

the third link span including optical fiber segments from the plurality of optical fiber segments having the first optical fiber type, the second optical fiber type and the third optical fiber type.

19. The apparatus of claim 16, wherein:

the plurality of optical fiber segments is from a first optical fiber type, a second optical fiber type and a third optical fiber type,

the first optical fiber type has a positive dispersion and a positive dispersion slope,

the second optical fiber type has a negative dispersion and a negative dispersion slope, and

the third optical fiber type has one from the group of (1) a positive dispersion and a negative dispersion slope, and (2) a negative dispersion and a positive dispersion slope.

20. The apparatus of claim 16, wherein:

the plurality of optical fiber segments being from a first optical fiber type, a second optical fiber type and a third optical fiber type,

the first optical fiber type having a dispersion and a dispersion slope,

the second optical fiber type having a dispersion and a dispersion slope equal in magnitude to and opposite signed from the dispersion and the dispersion slope of the first optical fiber type,

the third optical fiber type having a dispersion opposite signed from the dispersion of the first optical fiber type and having a dispersion slope opposite signed from the dispersion slope of the second optical fiber type.